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EXAMINER	
CHOWDHURY, SUMAIYA A	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/028,299	DIMITROVA ET AL.	
	Examiner	Art Unit	
	Sumaiya A. Chowdhury	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/8/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,5-13,15-20,24,25,29,30 and 33-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3,5-13,15-20,24,25,29,30 and 33-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/08/07 has been entered.

Claim Objections

2. Claim 33 is objected to because of the following informalities:

Claim 33 is dependent on canceled claim 32. For the rest of the Office Action, claim 33 will depend on claim 30.

Appropriate correction is required.

Response to Arguments

3. Applicant's arguments with respect to claims 2-3, 5-13, 15-20, 24-25, 29-30, and 33-44 have been considered but are moot in view of the new ground(s) of rejection.

(a) Applicant argues in reference to the Boloker reference, "Multi-modal browsers do not use modal logic" on page 12, 2nd paragraph of the Remarks.

Although the Examiner disagrees for the reasons indicated previously in the Advisory Action dated 3/08/07, the Examiner has withdrawn the Boloker reference.

(b) Applicant states that an appropriate 37 CFR 1.131 has been entered swearing behind Akella, on page 13, 4th paragraph of the Remarks.

The concept as described in the 37 CFR 1.131 DECLARATION OF PRIOR INVENTION does not teach each element in the claim. No evidence has been submitted to show that the applicant had been diligent during the critical period. A mere allegation of diligence is not sufficient to overcome the date. 12/24/01 will continue to be considered the effective filing date.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Akella reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See Mergenthaler v. Scudder, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). The applicant did not provide any facts and or documentary evidence, such as sketches, lab notebook entries, etc., as required under MPEP 715.07(I). Specifically, there is nothing showing evidence that the inventor conceived each an every limitation of claim 10, for example, the limitation "a memory with a hierarchy of linked index nodes and content nodes" as claimed in claims 10, 11, 12, 13, 15 and 16 is not found in the evidence of conception.

The evidence submitted is insufficient to establish diligence prior to the filing date of the Bates reference to either a constructive reduction to practice or an actual

reduction to practice. The applicant did not provide any evidence of diligence as required by 715.07(a). The entire period during which diligence is required must be accounted for by either affirmative acts or acceptable excuses. An applicant must account for the entire period during which diligence is required. Gould v. Schawlow, 363 F.2d 908,919, 150 USPQ 634,643 (CCPA 1966) (Merely stating that there were no weeks or months that the invention was not worked on is not enough.); In re Harry, 333 F.2d 920, 923, 142 USPQ 164, 166 (CCPA 1964) (statement that the subject matter "was diligently reduced to practice" is not a showing but a mere pleading). A 2-day period lacking activity has been held to be fatal. In re Mulder, 716 F.2d 1542, 1545, 219 USPQ 189, 193 (Fed. Cir. 1983). See MPEP § 2138.06 for a detailed discussion of the diligence requirement for proving prior invention.

(c) Applicant argues in reference to the Akella reference "The paragraphs referenced by the Examiner are primarily concerned with rules for determining when to take a snapshot rather than any analysis of the snapshots" on page 13, 6th paragraph of the Remarks.

Akella clearly teaches analyzing the snapshots ([0031], lines 3-8, [0025], lines 1-4, step 405 - fig. 4).

(d) Applicant argues in reference to the Akella reference that it fails to teach or suggest a program or processor programmed to analyze the snapshots on page 14 of the Remarks.

Akella clearly teaches an automated program and processor to analyze the snapshot database (405 – fig. 4; [0017], [0031],lines 3-8)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 3, 5, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) in view of Graves (5410344)

Regarding claim 5 Arellano teaches a data processing system (fig. 7) comprising:

a demultiplexer (par. 103, line 13; Arellano inherently teaches a demux to separate the various data components received via the network fig. 18 for processing) which demulitplexes at least visual, audio, and multimedia content (par.33) into data components (par. 83, in which multimedia [including visual and audio, TV, etc.] content is received via a network device, e.g., TV, set-top, computer; par. 696; par. 86, lines 9-10; par. 91, line 1-6; par. 103; fig. 17, 18, 19);

one or more content analyzer routines (engines) which analyze the data components (par. 88; 91; 114; 127, lines 6-16; par. 128) to derive at least facts from the relevant user experience (interaction data; par. 88; 153; 321-322) and behavior (patterns and trends; par. 85, lines 4-6; par. 88);

a store computer routine (modeling system) which stores at least the derived facts (par. 90; 112), user experience (par. 90; 114) and behavior (par. 114), other facts (community derived facts; par. 114, lines 10-13) and information (program schedule, application specific information, delivery device characteristics, etc; par. 39, lines 6-9 par.154; par. 83; par. 118), and user inputs (par. 89) responsive to user queries (par. 105, lines 1-3,11-13; par. 127; par. 153) into an adaptive memory (fig. 18-20; par. 128; par. 174; par. 92, lines 3-6, 9-11; par. 39, lines 29-33; par. 42, lines 1-6; par. 82, lines 4-7; par. 84, line 9; par. 105, line 9; par. 193-195) with a hierarchy (par. 100, lines 5-8; par. 176; par. 177, lines 12-16; par. 890; par. 908, lines 1-5, 14-15) of linked (correlated) index (categorized) nodes (groups and subgroups of features that comprise content elements, e.g., keywords, content type, semantics, etc.) (fig. 25, 28, 30; par. 95; 112; par. 170; 173; 176; 747-749; 881-882), each node corresponding to subcategory (subclass) of information (par. 908, lines 4-10; fig. 25, 28); and

a reasoning and fact reconciling computer routine (agent/expert; par. 85 &16; 92; 95; par. 171, lines 6-8; par. 190, lines 6-10; par. 321-322) which controls the adaptive memory to create at least one link (similarity correlation) to a content node (par. 92, lines 7-12; par. 95, lines 4-6; par. 225; 881-882; fig. 25 & 28; in which the system creates correlation/links to the user model based on feature/feature-values of content

elements for predicting and realizing user interests, preference, and behavior; par. 205 features serve as the link between the user and content) and weak links to other index nodes, which weak links do not fit into the hierarchy (creates links to other index nodes that are not based on the subcategories of information/content, i.e., the feature/feature-value nodes) (situation-action pairs, do not fit into the pragmatic feature-value hierarchy which is application specific, i.e., content based [par. 136, 138; par. 19, lines 7-11 & par. 21, lines 1-8], and are used to provide other cognitive indexing nodes, i.e., categorizing groups and sub-groups, based on a user's goals or persona, which are not connected to the application/content hierarchy; par. 139-140; par. 19, lines 4-7; par. 171, lines 10-13; fig. 13; par. 91; par. 20; par. 21, lines 16-19; par. 83).

However, Arellano fails to teach modal logic is used to control the adaptive memory.

In an analogous art, Graves teaches a neural network is used to select at least one of the plurality of audiovisual programs for a user. The neural network process predicts the programs in which a viewer would have the highest interest by determining a grade for each analyzed program. (col. 6, lines 24-31, col. 7, lines 45-49, fig. 8, col. 8, line 31-col. 9, line 34).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Arellano's invention to include the above mentioned limitation, as taught by Graves, for the advantage of precisely predicting a program which might highly be of interest to the user.

Regarding claim 3, Arellano and Graves disclose the claimed limitations. In particular, Arellano teaches the facts derived from content comprise a summary (characterizations) of a relevant piece of content (par. 109, lines 16-21; par. 100; par. 112).

Regarding claims 7, Arellano and Graves disclose the claimed limitations. In particular, Arellano teaches the facts derived from user behaviors include at least one record of presence of the user (par. 118-119).

Regarding claim 8, Arellano and Graves disclose the claimed limitations. In particular, Arellano teaches the facts derived from user behaviors include at least one record of queries (request) (par. 127-128; par. 105, lines 1-3,11-13; par. 153).

Regarding claim 9, Arellano and Graves disclose the claimed limitations. In particular, Arellano teaches at least one snapshot, which snapshot acts as a bias toward a longer term view of user behavior (par. 90, 737; par. 190, lines 8-12; par. 29, lines 7-10; par. 39, lines 30-33; par. 128; par. 18; in which snapshots maintained for longer/continuing time period, for analyzing/finding future trends and patterns).

2. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arrelano and Graves as applied to claim 5 above, and further in view of Maissel et al. (US 6,637,029 B1).

Regarding claim 2, Arellano teaches the facts derived from content comprise information supplemental information about the content (par. 112).

However Arellano and Graves fail to specifically disclose a name of at least one person who participated in creation of a relevant piece of content.

In an analogous art, Maissel teaches a name of at least one person who participated in creation of a relevant piece of content for filtering out content preferred by the user (col. 11, lines 14-26; col. 12, lines 16-26).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano and Graves to include a name of at least one person who participated in creation of a relevant piece of content for filtering out content preferred by the user for the added advantage of providing additional information about the user's preferences to increase the effectiveness of the user model.

Regarding claims 6, Arellano teaches the facts derived from user behaviors as discussed in claim 5 above and further teaches capturing user behavior/interactions (par. 89-90; par. 132; par. 140).

However, Arellano and Graves fails to specifically disclose at least one record of play sequence commands.

In an analogous art Maissel teaches at least one record of play sequence commands for determining user behavior, e.g., channel surfing (col. 17, lines 17-61).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano and Graves to include at least one record of play sequence commands for the added advantages of increased user comfort by enabling the EPG to perform the user's preferred actions automatically (Maissel – col. 45-50).

3. Claims 10-13, 34-38 and 41are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Akella et al. (US 2002/0178146 A1).

Regarding claim 10, Arellano teaches a data processing system comprising:

a memory (fig. 18-20; it is inherent to have memory in a computer environment) with a hierarchy (par. 100, lines 5-8; par. 176; par. 177, lines 12-16; par. 890; par. 908, lines 1-5, 14-15) of linked (correlated) index (categorized) and content nodes (groups and subgroups of features that comprise content elements, e.g., keywords, content type, semantics, etc.) (fig. 25, 28, 30; par. 95; 112; par. 170; 173; 176; 747-749; 881-882);

at least one processor (fig. 18, 19, 20, it is inherent to have processor in a computer server environment; par. 193, line 1-2) which perform operations to make the memory into a personal adaptive memory (fig. 18-20; par. 128; par. 174; par. 92, lines 3-6, 9-11; par. 39, lines 29-33; par. 42, lines 1-6; par. 82, lines 4-7; par. 84, line 9; par. 105, line 9; par. 193-195), the processor being programmed with code (software) to perform operations (par. 41, 82, 107, 199-200) including the following:

capturing content experienced by a relevant user (par. 190, lines 6-12; par. 84, lines 9-11;par. 88, lines 4-6; par. 89, 127,128; par. 171, lines 1-7) and the relevant user's behaviors (par. 85, lines 5-9; par. 88, lines 5-11; par. 90; par. 91, lines 7-11; par. 92, line 3-6; par. 114, lines 3-9; par. 190, lines 12-17);

analyzing the content and behaviors to create updated content and behavior data (par. 88; 91; 114; 127, lines 6-16; par. 128; par. 105, lines 1-3,9-13; par. 139-140); and

updating the adaptive personal memory with updated data (par. 105, lines 1-3,9-13; par. 139-140);

at regular intervals, taking snapshots indicative of user interests (par. 90, 737; par. 190, lines 8-12; par. 29, lines 7-10; par. 39, lines 30-33; par. 128; par. 18;

However Arellano fails to specifically disclose analyzing the snapshots for adaptive memory tracking and evolution of the user.

In an analogous art Akella teaches it is desirable to analyze the snapshots in order to detect changes in user information and determine historical trends (Abstract; par. 9; par. 10, lines 1-5; par. 23, lines 1-6; par. 24; par. 27, lines 15-21).

Therefore it would have been obvious to one of ordinary skill in the art to modify the system of Arellano to include analyzing the snapshots as taught by Akella for the added advantage of reduced memory requirements and more efficiently determining when, why and how new snapshots are taken (Akella – par. 24).

Regarding claims 11 and 38, Arellano in view of Akella teach the operations further comprise interfacing with the user (Arellano-par. 117-126; par. 110; par. 183; par. 154-155; par. 27, lines 10-12) and acquiring more data from the user (par. 128; par. 114, lines 7-9).

Regarding claims 12 and 41, Arellano in view of Akella teach interfacing further comprises one of recommending new content based on the adaptive personal memory (Arellano-par. 147, lines 1-8).

Regarding claim 13, Arellano in view of Akella teach determining a level of interest in a particular content (web page) responsive to one of what queries (web page request) were made (Arellano-par. 190).

Regarding claims 34, 36 and 44, Arellano teaches a computer program embodying code for causing the data processing device (fig. 18, 19, 20, it is inherent to have processor in a computer server environment; par. 193, line 1-2) to perform operations (par. 82, lines 6-10; par. 89, lines 3-4; par. 41, 107, 199-200) to maintain at

least one adaptive personal memory (fig. 18-20; par. 128; par. 174; par. 92, lines 3-6, 9-11; par. 39, lines 29-33; par. 42, lines 1-6; par. 82, lines 4-7; par. 84, line 9; par. 105, line 9; par. 193-195) with information including personal information (par. 91, lines 6-10), facts derived from content experienced by at least one relevant user (par. 190, lines 6-12; par. 84, lines 9-11;par. 88, lines 4-6; par. 89, 127,128; par. 171, lines 1-7), facts derived from the relevant user's behavior (par. 85, lines 5-9; par. 88, lines 5-11; par. 90; par. 91, lines 7-11; par. 92, line 3-6; par. 114, lines 3-9; par. 190, lines 12-17), the computer program embodying code for:

capturing content experienced by a relevant user (par. 190, lines 6-12; par. 84, lines 9-11;par. 88, lines 4-6; par. 89, 127,128; par. 171, lines 1-7);

capturing the relevant user's behaviors (par. 85, lines 5-9; par. 88, lines 5-11; par. 90; par. 91, lines 7-11; par. 92, line 3-6; par. 114, lines 3-9; par. 190, lines 12-17);

updating the adaptive personal memory (par. 105, lines 1-3,9-13; par. 139-140);

periodically creating a snapshot depicting the captured relevant user's experienced content and behavior over a preceding period (par. 90, 737; par. 190, lines 8-12; par. 29, lines 7-10; par. 39, lines 30-33; par. 128; par. 18; in which the snapshot is maintained for longer/continuing time period for analyzing/finding future trends and patterns in content experienced/interacted);

analyzing the snapshot to develop patterns trends and tendencies in the relevant user's behavior (737; par. 190, lines 8-12; par. 29, lines 7-10; par. 39, lines 30-33; par. 128; par. 18; in which the snapshot is maintained for longer/continuing time period for

analyzing/finding future trends and patterns in content experienced/interacted as discussed above); and

pushing (recommending content) to the relevant user in accordance with the patterns, trends, and tendencies developed from the snapshots (par. 147, lines 1-8; content is recommended based on the user model which is in accordance with the patterns, trends, and tendencies developed from the snapshots).

However Arellano fails to specifically disclose analyzing a plurality of the snapshots.

In an analogous art Akella teaches it is desirable to analyze a series of snapshots in order to detect changes in user information and determine historical trends (Abstract; par. 9; par. 10, lines 1-5; par. 23, lines 1-6; par. 24; par. 27, lines 15-21).

Therefore it would have been obvious to one of ordinary skill in the art to modify the system of Arellano to include analyzing a series of the snapshots as taught by Akella for the added advantage of reduced memory requirements and more efficiently determining when, why and how new snapshots are taken (Akella – par. 24).

Regarding claim 35 it is analyzed and rejected similar to claim 7 above.

Regarding claim 37, Arellano in view of Akella teach the operations further comprise

capturing content (movies) summaries (EPG/characterizations) of the content experienced by the relevant user (par. 109, lines 16-21; par. 100; par. 112; par. 148); and

analyzing the captured content (par. 88; par. 91, lines 1-6; par. 114; par. 127, lines 6-16) and content summaries (par. 110,127) and behaviors (par. 88,114,128) to create updated personal data (par. 88; 153; 321-322);

updating the adaptive memory with the updated personal data (par. 128; par. 139-140; par. 105, lines 1-3,9-13; par. 139-140).

4. Claims 15, 39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Akella et al. (US 2002/0178146 A1) as applied to claims 10 and 34 above and in further view of Elenbaas et al. (US 2005/0028194 A1).

Regarding claims 15, 39 and 42, Arellano in view of Akella teach the system is a multi-agent, multi-paradigm (multi-standard) modeling system (Arellano-par. 84, lines 9-11) that may represent content with a plurality of representations (par. 751-752). Arellano in view of Akella even further teaches the system is an MVC that promotes modularity and decoupling of application data/content from the mechanisms that manipulate the data which enables software reuse (interoperability) (Arellano-par. 107).

However Arellano in view of Akella fail to specifically disclose non-monotonic logic.

However In an analogous art, Elenbaas teaches it is desirable and well known in the art to use non-monotonic logic as a tool to filter programming in accordance with user preferences (par. 46, lines 10-20; par. 111).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano in view of Akella to include use of non-monotonic logic as taught by Elenbaas for the added advantage of providing a more robust system that is capable of supporting the integration and reuse of hybrid (non-monotonic) logics from different domains (Arellano – par. 92, 106-107; par. 84, lines 9-11; par. 751-752; par. 26) because technological advancements in knowledge based systems are unpredictable.

5. Claims 16, 40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1), Akella et al. (US 2002/0178146 A1) and Elenbaas et al. (US 2005/0028194 A1) as applied to claims 10 and 15, and 34 and 39 above and in further view of Graves.

Regarding claims 16, 40, and 43, Arellano in view of Akella and Elenbaas teach the systems logic/reasoning processes are introspective and continuously reevaluate the importance of features of the user model (Arellano-par. 92, lines 3-9) and further that the system uses heuristics, i.e., trial-and-error, to generate presentations (par. 125). Arellano in view of Akella and Elenbaas even further teach that when a user desires to expand/discover new content the system reanalyzes the model logic and determines

the relevance/effectiveness of the model logic so that the system is self-improving (Arellano-par. 127, line 6-par. 128; par. 321-322) and that the user model is based on the user's continuing tendency to select certain contents/subjects, i.e., the current models prediction logic is contingent upon the user's future possible actions which may change over time accordingly changing the models prediction logic (Arellano-par. 190), e.g., the user may continuously view www.xyz.com/bowling this week so the current model logic adapts the browser to automatically go to that page when the user request www.xyz.com, however in the future if the user's tendency changes to going to www.xyz.com/fishing instead the model prediction logic will adapt of change because the past logic is no longer valid therefore the model logic is contingent upon predictions being held true or false [par. 910].

However, Arellano in view of Akella and Elenbaas fail to specifically disclose using modal logic.

In an analogous art, Graves teaches a neural network is used to select at least one of the plurality of audiovisual programs for a user. The neural network process predicts the programs in which a viewer would have the highest interest by determining a grade for each analyzed program. (col. 6, lines 24-31, col. 7, lines 45-49, fig. 8, col. 8, line 31-col. 9, line 34).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Arellano in view of Akella and Elenbaas to include using modal logic as taught by Graves, for the added advantage of

increasing the learning and adaptive capability of the system which will generate better user model and increase user satisfaction.

6. Claims 17, 20, 24, 25, 29-30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) in view of Graves and Elenbaas et al. (US 2005/0028194 A1).

Regarding claims 17, 20, 29, 30, and 33, Arellano teaches a data processing system comprising an adaptive memory (fig. 18-20; par. 128; par. 174; par. 92, lines 3-6, 9-11; par. 39, lines 29-33; par. 42, lines 1-6; par. 82, lines 4-7; par. 84, line 9; par. 105, line 9; par. 193-195) with a hierarchy (par. 100, lines 5-8; par. 176; par. 177, lines 12-16; par. 890; par. 908, lines 1-5, 14-15) of linked (correlated) nodes (groups and subgroups of features that comprise content elements, e.g., keywords, content type, semantics, etc.) (fig. 25, 28, 30; par. 95; 112; par. 170; 173; 176; 747-749; 881-882) and weak links outside the hierarchy (links to other index nodes that are not based on the subcategories of information/content, i.e., the feature/feature-value nodes) (situation-action pairs, do not fit into the pragmatic feature-value hierarchy which is application specific, i.e., content based [par. 136, 138; par. 19, lines 7-11 & par. 21, lines 1-8; par. 91, lines 1-7], and are used to provide other cognitive nodes, i.e., categorizing groups and sub-groups, based on a user's goals or persona, which are not connected to the application/content hierarchy; par. 139-140; par. 19, lines 4-7; par. 171, lines 10-13; fig. 13; par. 91; par. 20; par. 21, lines 16-19; par. 83);

at least one processor which maintains the adaptive memory in accordance with ongoing user behaviors and content experience by implementing code for performing operations including:

forming at least one query, responsive to the adaptive memory (par. 105, lines 11-13;par. 153), for one of recommending new content based on the adaptive personal memory (par. 147, lines 1-8; in which the analysis engine queries the user model/memory) and capturing content experienced by a the user (par. 190, lines 6-12; par. 84, lines 9-11;par. 88, lines 4-6; par. 89, 127,128; par. 171, lines 1-7) and the user's relevant behavior (par. 85, lines 5-9; par. 88, lines 5-11; par. 90; par. 91, lines 7-11; par. 92, line 3-6; par. 114, lines 3-9; par. 190, lines 12-17);

analyzing the experienced content (par. 88; par. 91, lines 1-6; par. 114; par. 127, lines 6-16), the user behavior (par. 88,114,128), and responses to the at least one query (par. 153,114) to create updated data (par. 88; 153; 321-322); and

updating the adaptive memory with the updated data (par. 105, lines 1-3,9-13; par. 139-140).

Arellano further teaches the systems logic/reasoning processes are introspective and continuously reevaluate the importance of features of the user model (par. 92, lines 3-9) and further that the system uses heuristics, i.e., trial-and-error, to generate presentations (par. 125). Arellano even further teaches that when a user desires to expand/discover new content the system reanalyzes the model logic and determines the relevance/effectiveness of the model logic so that the system is self-improving (par. 127, line 6-par. 128; par. 321-322) and that the user model is based on the user's

continuing tendency to select certain contents/subjects, i.e., the current models prediction logic is contingent upon the user's future possible actions which may change over time accordingly changing the models prediction logic (par. 190), e.g., the user may continuously view www.xyz.com/bowling this week so the current model logic adapts the browser to automatically go to that page when the user request www.xyz.com, however in the future if the user's tendency changes to going to www.xyz.com/fishing instead the model prediction logic will adapt of change because the past logic is no longer valid therefore the model logic is contingent upon predictions being held true or false [par. 910]. Even furthermore Arellano teaches the system is a multi-agent, multi-paradigm (multi-standard) modeling system (par. 84, lines 9-11) that may represent content with a plurality of representations (par. 751-752). Arellano even further teaches the system is an MVC that promotes modularity and decoupling of application data/content from the mechanisms that manipulate the data which enables software reuse (interoperability) (par. 107).

However, Arellano fails to specifically disclose using modal non-monotonic logic.

In an analogous art, Graves teaches a neural network is used to select at least one of the plurality of audiovisual programs for a user. The neural network process predicts the programs in which a viewer would have the highest interest by determining a grade for each analyzed program. (col. 6, lines 24-31, col. 7, lines 45-49, fig. 8, col. 8, line 31-col. 9, line 34).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Arellano to include using modal logic

as taught by Graves, for the added advantage of increasing the learning and adaptive capability of the system which will generate better user model and increase user satisfaction.

Arellano in view of Graves fail to specifically disclose non-monotonic logic.

However In an analogous art, Elenbaas teaches it is desirable and well known in the art to use non-monotonic logic as a tool to filter programming in accordance with user preferences (par. 46, lines 10-20; par. 111).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include use of non-monotonic logic as taught by Elenbaas for the added advantage of providing a more robust system that is capable of supporting the integration and reuse of hybrid (non-monotonic) logics from different domains (Arellano – par. 92, 106-107; par. 84, lines 9-11; par. 751-752; par. 26) because technological advancements in knowledge based systems are unpredictable.

Regarding claims 20, 25 and 33, they are analyzed and rejected similar to claim 9 above.

Regarding claim 24 it is analyzed and rejected similar to claim 7 above.

7. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1), Graves, and Elenbaas et al. (US 2005/0028194 A1) as applied to claim 17 above and further in view of Sezan et al. (US 2005/0091686 A1).

Regarding claims 18, Arellano in view of Graves and Elenbaas teach seeking (identifying) new content having content models in common with previously experienced (interacted) content (Arellano-par. 112; par. 147; par. 91, lines 6).

However Arellano in view of Graves and Elenbaas fails to specifically disclose a participant.

In an analogous art, Sezan teaches it is desirable to identify participants (e.g., directors, actors, etc.) in new content in common with previously watched content for searching and filtering out content of preferred by the user (par. 47, lines 1-7; par. 41, lines 3-10; par. 42, lines 21-35; par. 45, lines 20-27).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano in view of Graves and Elenbaas to include the limitation a participant as taught by Sezan for the advantage of increasing user convenience and satisfaction by identifying new content the user would like by enabling the user model/profiler to acknowledge the user's preferred actors, directors, etc.

Regarding claims 19, Arellano in view of Graves and Elenbaas teach seeking (identifying) new content having content models in common with previously experienced (interacted) content (Arellano-par. 112; par. 147; par. 91, lines 6).

However Arellano in view of Graves and Elenbaas fails to specifically disclose summary information.

In an analogous art, Sezan teaches it is desirable to identify summary (program profile, e.g., stars in the movie, rating, keywords, categories, etc.) information in new content in common with previously watched content for searching and filter out content of preferred by the user (par. 47, lines 1-7; par. 41, lines 3-10; par. 42, lines 21-35; par. 45, lines 20-27).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano in view of Graves and Elenbaas to include the limitation summary information as taught by Sezan for the advantage of increasing user convenience and satisfaction by identifying new content the user would like by enabling the user model/profiler to acknowledge the user's preferred content profiles.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumaiya A. Chowdhury whose telephone number is (571) 272-8567. The examiner can normally be reached on Mon-Fri, 9-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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SAC

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